REMARKS

Examiner C. Tran, is thanked for the thorough examination and search of the subject Patent Application and for finding allowable subject matter in Claims 19 and 50-53. Claims 5, 20, 22, 31, and 54 have been amended.

All Claims are believed to be in condition for Allowance, and that is so requested.

Reconsideration of Claims 20 and 22 objected to under 37 CFR 1.75(c) as being of improper dependent form is requested based on Amended Claims 20 and 22 and on the following remarks.

Claims 20 and 22 have been amended to depend from Claim 18 rather than Claim 1. This amendment provides antecedent basis for the phrase, "said core structure" from Claim 18 in each amended claim.

Reconsideration of Claims 20 and 22 objected to under 37 CFR 1.75(c) as being of improper dependent form is requested based on Amended Claims 20 and 22 and on the above remarks.

Reconsideration of the drawings objected to under 37 CFR 1.83(a) is requested based on Amended Claims 5, 31, and 54 and on the following remarks.

Claims 5 and 31 have been amended to state that the metal powder is metal plated. Applicant believes that these amendments should clarify Claims 5 and 31 without requiring a change in the drawings. Applicant notes that the conductive powder is shown in Fig. 2 as element 34 and in Fig. 4 as element 34. Further, the Specification on page 11 states:

> "The micron conductive powders can be carbons, graphites, amines or the like, and/or of metal powders such as nickel, copper, silver, or **plated** or the like."

The above reference makes clear that Applicant's claimed invention is intended to cover metal powders that are plated.

Claim 54 has been amended to change the term "chamber" to the term "hopper" as is used to describe element 80 of Fig. 6b where the extrusion method is depicted schematically. Applicant believes that this amendment should clarify Claim 54 such that a drawing change is not necessary.

Reconsideration of the drawings objected to under 37 CFR 1.83(a) is requested based on Amended Claims 5, 31, and 54 and on the above remarks.

Reconsideration of Claims 1-18, 20-49, and 54-58 rejected under 35 USC 102(b) as being anticipated by Jones et al is requested based the following remarks.

Applicant agrees that Jones et al (Jones) teaches a method to form a conductive fiber for use in an electrostatic cleaning device. However, Applicant respectfully disagrees that Jones teaches any type of an inductor device comprising a conductive loaded resin-based material as taught in Applicant's claimed invention. In particular, Applicant's claimed invention, as recited in independent Claims 1, 28, and 44 teaches that a conductive loaded, resin-based material is formed into an inductive loop. For example, Claim 1 reads:

> 1. (Original) An inductor device comprising a loop of conductive loaded, resin-based material comprising conductive materials in a base resin host.

By comparison, Jones teaches a method to form fibers for an electrostatic cleaning device. These fibers comprise conductive magnetic filler material in a polymer. The polymer with magnetic filler material is spun into a fiber shape that is useful for forming woven textile-like devices (col. 9, lines 6-12). However, Applicant can find no teaching in Jones of forming any type of inductive device from the fibers.

Applicant notes Examiner's finding on page 3, under section 4, that:

> "Regarding claims 1, 20, and 38, Jones disclose an inductor device comprising a loop of conductive loaded, resin-based material (Fig. 2A) comprising conductive materials (110) in a base resin host (100) (Fig. 1) (Col. 3, Line 60).

Applicant has carefully reviewed the above and finds that Fig. 2a does, indeed, disclose an inductor device 210 - in this case an electromagnet. However, the device 210 comprises a wire 215 wrapped onto a soft iron core 217 and having a central passage way 220. The fiber of the invention (such as element 300 of Fig. 2C) is passed through this passage way to thereby be exposed to a magnetic field. The electromagnet 210 is not in anyway made from the fiber 300, rather, it is used to magnetically

manipulate the magnetically conductive material 110 in the fiber. The fiber 300 itself is not part of the inductor device 210. Further, the fiber 300 is not used to form the inductive loop of the device. This loop 215 is formed with wire as shown by column 7, lines 47-64:

> FIGS. 2A-2B illustrate an alternative embodiment of a magnet. As illustrated in FIG. 2A, magnet 210 is an electromagnet in which electric current is passed through wire coils 215 wrapped around a soft iron core 217 in order to produce the magnetic field. The fiber passes through the magnetic field via passage 220, as seen in the cross-section of the magnet in FIG. 2B. As seen in FIG. 1C, a fiber passed through the magnet 210 having the arrangement shown in FIGS. 2A and 2B permits the formation of a fiber 300 having stripes of conductive magnetic particles 310 along the outer periphery. Additional or fewer stripes may be obtained by adding or removing additional coil sections to or from the magnet 210. As understood by one of ordinary skill in the art, the magnetic field strength produced by the magnet having the arrangement shown in FIGS. 2A and 2B depends on the number of turns of the coiled wire 215, the size of the current passing through the

coils, and the magnetic permeability of the core 217 (column 7, lines 47-64).

Applicant respectfully disagrees with this finding.

Further, since Jones does not appear to teach the key feature of an inductor device where the inductor is formed from a conductive loaded, resin-based material, Applicant respectfully requests that the rejection of Claims 1, 20 and 44 be reconsidered. In addition, depended Claims 2-18, 21-49, and 54-58 contain patentably distinct, further limitations on independent Claims 1, 20, and 44, and Applicant respectfully requests that the rejection of these claims be reconsidered in light of Claims 1, 20, and 44.

Reconsideration of Claims 1-18, 20-49, and 54-58 rejected under 35 USC 102(b) as being anticipated by Jones et al is requested based the above remarks.

In addition, Applicant wishes to respectfully disagree with several other findings in the present action.

In regards to Claims 5 and 6 (as discussed on page 3 of the present action), Applicant does not believe that Jones discloses

a metal powder that is plated. Applicant has reviewed the cited section, Col. 6, line 24, as well as the entirety of Jones and does not find any reference to metal plating.

In regards to Claims 15, 36, and 56 (as discussed on page 4 of the present action), Applicant does not believe that Jones discloses an electrically insulating layer surrounding said loop (core structure) (Col. 5, Line 53). Applicant has reviewed the cited section, Col. 5, line 53, of Jones. It appears that this section discusses the content of the conductive magnetic material that is used as filler in the polymer of the overall fiber. An insulating magnetic material may be used. Applicant's claimed invention, as recited in Claims 15, 36, and 56, describes an inductive loop formed of the conductive loaded, resin-based material this loop may then further comprise an electrically insulating layer. Jones does not appear to teach forming an electrically insulating layer around the fiber (i.e. element 100 of Fig. 1C). And, Jones does not appear to teach forming an inductor device of the fiber.

In regards to Claims 16, 21, and 37 (as discussed on page 4 of the present action), Applicant does not believe that Jones discloses an electrically insulating layer surrounding the loop as being resin-based material (Col. 6, line 19). As described

above, Applicant has reviewed Jones and can find no teaching regarding the forming of an electrically insulating layer around the fiber (i.e. element 100 of Fig. 1C). And, Jones does not appear to teach forming an inductor device of the fiber.

In regards to Claim 17 (as discussed on page 4 of the present action), Applicant does not believe that Jones discloses the electrically insulating layer surrounding the loop as being flexible (Col. 7, line 50). Jones appears to refer to wrapping the wire coils 215 around a soft iron core 217 (in which case the wire would be flexible). However, as described above, Jones does not appear to teach forming the inductive loop (the wire) out of the conductive loaded, resin-based material as is taught in Applicant's claimed invention.

In regards to Claims 24 and 40-41 (as discussed on page 5 of the present action), Applicant does not believe that Jones discloses a second loop (Fig. 2A). As described above, Jones does not appear to teach forming the inductive loop (the wire) out of the conductive loaded, resin-based material as is taught in Applicant's claimed invention. The wire 215 appears to be just wire.

In regards to Claims 24 and 40-41 (as discussed on page 5 of the present action), Applicant does not believe that Jones discloses a second loop and a core structure located inside said second loop wherein said core structure inductively couples said loops (Fig. 2A). As described above, Jones does not appear to teach forming the inductive loop (the wire) out of the conductive loaded, resin-based material as is taught in Applicant's claimed invention. The wire 215 appears to be just wire. The fiber 300 is not part of the inductive device.

In regards to Claim 25 (as discussed on page 5 of the present action), Applicant does not believe that Jones discloses that said loop and said second loop each comprises multiple turns of said conductive loaded, resin-based material (Fig. 2A). As described above, Jones does not appear to teach forming the inductive loop (the wire) out of the conductive loaded, resin-based material as is taught in Applicant's claimed invention. The wire 215 appears to be just wire. The fiber 300 is not part of the inductive device.

In regards to Claims 26-27 and 42-43 (as discussed on page 5 of the present action), Applicant does not believe that Jones discloses that said loop is used to generate and detect a magnetic field (Abstract). As described above, Jones does not

appear to teach forming the inductive loop (the wire) out of the conductive loaded, resin-based material as is taught in Applicant's claimed invention. The wire 215 is part of an electromagnet but appears to be just wire. The fiber 300 is not part of the inductive device.

In regards to Claim 28 (as discussed on page 5 of the present action), Applicant does not believe that Jones discloses an inductor device comprising:

a conductive loop (215) (Abstract, Fig. 2B); and

a core structure (217) located inside said loop wherein said core structure comprises conductive loaded resin-based material (300) comprising conductive materials (310) in a base resin host (220)(Fig. 2)

Applicant notes that the core structure 217 of Jones that located inside conductive loop 215 comprises soft iron (Col. 7, Line 50). The fiber 300 of Jones is not located within the loop 215.

In regards to Claim 44 (as discussed on page 5 of the present action), Applicant does not believe that Jones discloses a method to form an inductor by **molding** (Col. 3, Line 16). Rather, Jones describes a method to form fibers for an electrostatic cleaning device by spinning.

In regards to Claim 54 (as discussed on pages 5 and 6 of the present action), Applicant does not believe that Jones discloses a method to form an inductor by **extrusion** (Col. 5, Line 3). Rather, Jones describes a method to form fibers for an electrostatic cleaning device by spinning.

In regards to Claim 55 (as discussed on page 6 of the present action), Applicant does not believe that Jones discloses stamping or milling the conductive loaded resin-based material (Col. 5, Line 29). Applicant cannot find reference to either of these processing methods in Jones.

In regards to Claims 56-58 (as discussed on pages 5 and 6 of the present action), Applicant does not believe that Jones discloses a method to form an electrically insulating layer over the inductive device (Col. 5, Line 50). As discussed above, Applicant has reviewed the cited section, Col. 5, line 50, of Jones. It appears that this section discusses the content of the conductive magnetic material that is used as filler in the polymer of the overall fiber. An insulating magnetic material may be used. Applicant's claimed invention, as recited in Claims 56-58, describes an inductive loop formed of the conductive loaded, resin-based material this loop may then further comprise

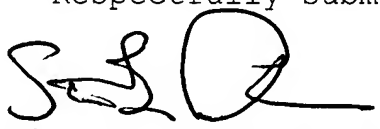
an electrically insulating layer. Jones does not appear to teach forming an electrically insulating layer around the fiber (i.e. element 100 of Fig. 1C). And, Jones does not appear to teach forming an inductor device of the fiber.

Applicants have reviewed the prior art made of record and not relied upon and have discussed their impact on the present invention above.

Allowance of all Claims is requested.

It is requested that should the Examiner not find that the Claims are now Allowable that the Examiner call the undersigned at 989-894-4392 to overcome any problems preventing allowance.

Respectfully submitted,



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